

## **REMARKS**

Claims 1-9, 11-28, 30-34, 44-49, 51, 52, 55-64, and 66-75 are now pending in the application. New Claims 69-75 are added by this amendment. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

## **APPLICANT INITIATED INTERVIEW SUMMARY**

Applicants thank the Examiner for the interview granted with Applicants Representative on September 10, 2009. During the interview, Independent Claims 1 and 44 were discussed with the Examiner in light of the cited art. During the interview, it was argued, and Applicants' representative believes an agreement was reached, that Solomon does not anticipate or fairly render obvious a controller operable to determine or illustrate an estimated optimized location. Accordingly, Applicants have amended Independent Claim 1 as discussed with the Examiner during the interview, which Applicants respectfully submit is in condition for allowance in light of Solomon and the other cited art.

An agreement as to allowability of any other pending claims was not reached with the Examiner, however, Applicants respectfully submit that the amendments included herein are in line with the discussion with the Examiner for at least Independent Claims 1, 22, 52, and 63, and the claims that depend directly or indirectly therefrom, therefore these claims should be allowable at least over Solomon and the other cited art.

Applicants' Representative believes that an agreement was also reached that the Examiner would contact Applicants' Representative if all of the claims are not found to be in condition for allowance over Solomon prior to the mailing of any further office actions.

**DOUBLE PATENTING REJECTION**

Claims 1-66 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-44 of co-pending Application No. 10/299,969.

Claims 44-49 and 51 are provisionally rejected on the ground of obviousness-type double patenting as being unpatentable over Claims 1-26 of U.S. Patent No. 6,892,090.

Claims 44-49 and 51 are provisionally rejected on the ground of obviousness-type double patenting as being unpatentable over Claims 1-12 and 14-51 of U.S. Application No. 11/068,342. These rejections are respectfully traversed.

While the provisional double patenting rejections can be raised and maintained, Applicants request that the rejections be held in abeyance until claims are allowed in the present application and a non-provisional double patenting rejection is made.

**REJECTION UNDER 35 U.S.C. § 112**

Claims 22-28, 30-34, 63-64, and 66 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claim 68 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which Applicants regard as the invention. These rejections are respectfully traversed.

As discussed with the Examiner, Applicants respectfully submit that the application as filed discloses illustrating or providing information to a user that can be displayed as multiple icons and/or multiple portions of icons that can be displayed on a display. Applicants respectfully submit such support can be found at least in para. 105 and 135 where location and path can be stored in a computer and displayed on an image (as disclosed in para. 135) and a road map can be provided to guide or suggest a possible path of the catheter to a target 158 (as disclosed in para. 105). The application further discloses that icons can be altered to display projected paths and widths of the icons can be altered on a display, as disclosed in para. 107-109. Thus, illustrating a plurality of icons relating to the instrument and a path of the instrument is disclosed. Accordingly, Applicants respectfully submit that multiple icons, as claimed, are supported by the application as filed.

Independent Claim 68 has been amended to overcome and render moot the rejection under section 112. Applicants have clarified that instrument information can be analyzed to determine whether an appropriate instrument is used. Claim 68 has also been amended into independent form, including the subject matter of Impendent Claim 1, and should therefore be in condition for allowance.

#### **REJECTION UNDER 35 U.S.C. §§ 102 AND 103**

Claims 1-9, 11-20, 22-28, 30-34, 52, 55-64, and 66-67 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Solomon (U.S. Pub. No. 2003/0018251,

hereinafter “Solomon”). Claims 44-49 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Solomon in view of Dekel, et al. (U.S. Pat. No. 6,203,497, hereinafter “Dekel”). These rejections are respectfully traversed.

Applicants respectfully submit that Solomon is directed to illustrating only image data acquired of the patient and other information acquired of the patient, such as an electrophysiological map of the heart. In particular, Solomon discloses that indicators 12', 22' can be illustrated relative to MRI images. The electrophysiology map of the heart can be superimposed on the previously acquired MRI data of the patient to show “current electrical activity” of the patient. See, Solomon, para. 46 and 56. Accordingly, Applicants respectfully submit that Solomon does not disclose a controller as recited in any of the Independent Claims 1, 22, 52 and 63.

Contrary to Solomon, Independent Claim 1 has been amended to recite “a controller . . . operable to register a 3-D model image to the image data and provide navigation and information of a possible path to direct the instrument through the region of the patient to an estimated optimized target site, wherein the estimated optimized target site can be identified on the 3-D model image along with a real time view of an icon representing the instrument moving toward the estimated optimized target site, wherein the estimated optimized target site is based at least in part on a statistical map that suggests where instrument placement should take place depending on the pathology of the patient.” Applicants respectfully submit that support for the amendment to Independent Claim 1 can be found in the application as filed including at least para. 95-97, 105, and 132. A road map or information regarding a path to reach a site is disclosed in para. 105 of the subject application as filed. Further, various statistics and

acquired information is disclosed in para. 132 that can be used for determining the estimated optimized target site. Further, para. 95-97 disclose registering a 3-D model to the image data and provide navigation and information regarding a path. Applicants respectfully submit that Solomon, contrary to Independent Claim 1, discloses acquiring image data and electrophysiology data of the patient and does **not** disclose or fairly render obvious a controller operable to register a 3-D model image data to the patient or to determine an estimated optimized target site.

Independent Claim 22 has been amended to recite “a controller that tracks the position of the instrument with said tracking device and receives the sensed physiological parameter from said sensor, said controller further estimates the optimized site based at least in part on the sensed physiological parameter and on the position of the instrument and superimposes an icon representing the location of the optimized site.” Applicants respectfully submit that a controller that estimates the optimized site, as recited in Independent Claim 22, is not anticipated or fairly rendered obvious by Solomon.

Independent Claim 52 has been amended to recite “automatically determining with a controller an optimized site to navigate the instrument to.” Again, Applicants respectfully submit that Solomon does not anticipate or fairly render obvious a method of automatically determining with a controller an optimized site.

Finally, Independent Claim 63 has been amended to recite, “a controller. . . wherein said controller operates to . . . provide an estimated optimized site to navigate the instrument to, and . . . superimpose an icon of the estimated optimized site onto the image data of the region of the patient.” As discussed above, Applicants respectfully

submit that a controller that operates to provide an estimated optimized site and superimpose an icon of the estimated optimized site is not anticipated or fairly rendered obvious by Solomon.

Accordingly, Applicants respectfully submit that all of Independent Claims 1, 22, 52 and 64 are patentable in light of Solomon at least for the reasons discussed above.

In addition, new Claims 69-74 have been added by this amendment and are further distinguishable over Solomon. Support for the various new claims can be found in the application as filed, at least in para. 95-97, 105, 108-109, and 132-135. For example, Applicants respectfully submit that a suggested possible path is supported by the application as filed at least in para. 132, 109, and 135.

Independent Claim 44 has been rejected in light of Solomon and Dekel. Applicants have amended Independent Claim 44 to recite “capturing a first image data from outside the patient with an ultrasound probe . . . capturing a second image data from outside the patient with a second imaging modality different from the ultrasound probe; registering the captured first image data and the second image data to the patient . . . displaying the location of the instrument on at least one of the first image data or the second image data . . . displaying the generated virtual image data from the virtual view point to the tracked instrument within the anatomy with the other of the first image data or the second image data.” As discussed with the Examiner, Dekel discloses determining a spatial position of an instrument and a transducer of an ultrasound system and displaying or re-sampling stored images based on the known position of the instrument and the transducer. See, Dekel, col. 5, Ins. 28-32 and col. 6, Ins. 29 to col. 7, In. 19. Applicants respectfully submit, however, that Dekel, either alone

or in combination with Solomon, does not anticipate or fairly render obvious capturing first and second image data and displaying a generated virtual view point and other image data. Accordingly, Applicants respectfully submit that an amended Independent Claim 44 and the claims that depend directly or indirectly therefrom are in condition for allowance.

**CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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